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1.0 INTRODUCTION

Ransom Environmental Consultants, Inc. (Ransom) has prepared the enclosed Voluntary Response Action Plan (VRAP) for review by the Maine Department of Environmental Protection (MDEP). The owner of the property, Village at Little Falls, LLC (VLF), seeks a "No-Action Assurance" letter from MDEP. Ransom understands that once clean-up measures proposed herein have been completed, MDEP will review clean-up documentation and issue a "Certificate of Completion" provided it concurs that the VRAP has been fully implemented.

The VLF property is comprised of two contiguous parcels of land located at 7 and 13 Depot Street in South Windham, Maine (Figure 1). 7 Depot Street is the former location of the Keddy Steel Mill. 13 Depot Street is the former location of the Energy Depot Company. Site development plans include demolition and removal of the former mill building and construction of residential units across the site.

In late 2004, VLF submitted to MDEP a VRAP application, application fees, and previous site investigation reports. The prior reports included:

1. Environmental Site Assessment, Phase I & II, Former Steel Mill Property, Route 202 and Depot Street ,Windham, Maine, by S.W. Cole Engineering, Inc., November 17, 1997.

2. Phase I Limited Environmental Assessment, Lot 7 of Map 38, Windham Township, South Windham, Cumberland County, Maine, by Consla Geotechnical Engineering, March 18, 1993.

3. Report on Supplemental Site Investigation, 7 Depot Street, Windham, Maine by Jacques Whitford Company, Inc., March 9, 2004.

4. Phase I and II, Environmental Site Assessments, Former Depot Energy Company 13 Depot Street, Windham, Maine, by Jacques Whitford Company, Inc., June 14, 2004.

Following review of these reports by MDEP, VLF, Ransom and Nick Hodgkins with MDEP met on August 27, 2004 to discuss clean-up requirements for the site. Key findings from this meeting are detailed below.

7 Depot Street

- MDEP has classified the entire site (7 and 13 Depot Street) as a "stringent" site; however, given specific onsite conditions and contaminant characteristics, clean-up will not be performed to the prescriptive criteria of a stringent clean-up, but will be modified to less-stringent criteria that is appropriate for the site.

- MDEP has requested that oily soils excavated during site development activities be transported off-site for proper disposal or reclamation (*e.g.*, asphalt batching). The "Baseline 2" standard would apply to heavy oils, such as motor oil or heating oils heavier than No. 2. Although not identified at the 7 Depot Street site, any spill of light oils, such as gasoline, would fall under MDEP "Intermediate" clean-up guideline.

- The investigation and remediation of PCBs at the site will require review by MDEP and the US Environmental Protection Agency (EPA) under the Toxic Substances Control Act (TSCA).

- The PCB mitigation will target source areas in site soils. Removal and/or stabilization of PCBs in source areas will be protective of human health and substantially reduce the potential for impacts to the nearby river. VLF will not be responsible for any testing or clean up associated with potential historic impacts to the river. Such impacts, if present, will be addressed by MDEP in the context of its ongoing regional and state water quality assessment programs.

13 Depot Street

- Gasoline-impacted soils will require remediation to the MDEP "Intermediate" guideline (5 mg/kg – lab result). Mr. Hodgkins noted that a reading of 50 ppm using a photoionization detector is often a reasonable target for identifying, in the field, soils that meet (or are close to meeting) the 5 mg/kg criteria. PID readings will guide proposed soil removal activities.

- Soils visibly impacted by motor oil or other petroleum products (such as surface stains under or near auto transmissions and other equipment) would require removal and off-site disposal or reclamation.

2.0 SITE BACKGROUND

2.1 7 Depot Street

2.1.1 Site Description

The site consists of a former steel mill located on 7 Depot Road in South Windham, Maine (refer to Figure 1). The approximately 6.5 acre parcel is bordered by Depot Street to the North, Maine Central Railroad tracks to the east, the Presumpscot River to the South and Route 202 to the West. The site was reportedly first developed for industrial use in the 1700s, and over the years uses included a saw mill, grist mill, manufactured wood board mill and the steel mill whose remnants presently occupy the site.

The site is presently occupied by a former mill building constructed primarily of concrete and brick. The majority of the building consists of two levels, including a basement that is partially below grade. According to S.W. Cole, the building included a boiler house,

forge shop, press building, melt building and offices. The forge shop and boiler house have been razed.

Public water and sewer are available to the site area. Portland Water District records for South Windham indicate that a number of residences generally east of the site have water supply wells. The closest wells to the site include the Boulanger, Georgatos and Reed residences, located about 500 to 1,000 feet to the northeast. Site topography indicates these residences are located at an elevation 20 to 40 feet higher than the site.

2.1.2 Prior Subsurface Investigations

S.W. Cole

Subsurface investigations by S. W. Cole in 1995 and 1996 included completion of twenty-four test pits targeting former storage tanks and other areas of potential concern. Soil samples were screened for volatile organic compounds with a photoionization detector (PID) and six soil samples were tested in a laboratory either for fuel oil, pesticides, PCBs, or heavy metals.

S. W. Cole identified heavy oil-impacted soil at the northern end of the site near Depot Street. The impacted soil was located in the vicinity of a two former above-ground heavy oil storage tanks (now removed). S. W. Cole removed approximately 11 tons of soil impacted by the heavy oil. The MDEP assigned a "Baseline-2" clean-up goal for the site. This goal includes removal of soils with fuel oil concentrations of 200 to 400 parts per million (ppm) based on field screening instrumentation. The Baseline-2 goal is generally applicable to sites in downtown urban areas or commercial strips where groundwater is not likely to be used in the future.

S. W. Cole's 1997 report indicated that the MDEP Baseline 2 goal was met following impacted soils removal. S. W. Cole further reported that "field headspace testing of soil samples from test pits adjacent to known and reported locations of the eleven storage tanks indicated non-detectable levels of ionizable organic compounds." S. W. Cole reported that six of the eleven fuel storage tanks remained at the site at the time of their investigation. The six tanks, formerly located in the boiler house, have since been removed and no subsurface impacts were reported.

Laboratory testing of soils by S. W. Cole detected no volatile organic compounds, and copper was the only heavy metal detected at concentrations higher than naturally-occurring soils. Laboratory testing of oil-impacted soil removed from the site identified no semi-volatile organic compounds using the toxicity characteristic leaching procedure (TCLP).

Jacques Whitford

In August, 2003, Jacques Whitford completed supplemental investigations including twelve test pits, six hand augers and twenty-three surface soil samples at the 7 Depot

Street site to evaluate areas of potential concern identified during previous site investigations. These areas included:

- Two former above ground fuel storage tanks (15,000 and 10,000 gallon capacity) near the railroad tracks on the east side of the site where oil-stained soils were observed during a previous site investigation;
- Two 1,000 gallon underground wastewater tanks adjacent to the north wall of the facility;
- Former 3,000 gallon above-ground fuel tank located at the end of a rail spur on the east side of the site;
- Transformer pad/electrical substation on the south side of the site;
- Former drum storage area at the south end of the former mill building;
- Former garage at the south end of the site; and
- Two floor drains on the ground floor of the main mill building.

Test Pits

On August 4, 2003, twelve test pits (TP-101 to TP-112) were advanced to evaluate areas of potential concern (refer to Jacques Whitford Figure 2, Appendix A). The rationale for each is listed below.

Sample ID	Location/Rationale
TP101	Adjacent to former wastewater holding tanks
TP102	In area of stressed/sparse vegetation during site walk on June 27, 2003
TP103	In area of stressed/sparse vegetation during site walk on June 27, 2003
TP104	Former No. 6 oil spill clean up area
TP105	Former No. 6 oil spill clean-up area
TP106	Former 250K gallon above ground fuel oil tank
TP107	Downslope from former Depot Energy Company
TP108	Downslope from former Depot Energy Company
TP109	Adjacent to former 15K gallon above ground fuel oil tank
TP110	Adjacent to former 10K gallon above ground fuel oil tank
TP111	Former outside drum storage area
TP112	River side of former garage

Jacques Whitford observed the test pitting, screened the soil with a PID, collected soil samples for laboratory analysis, and recorded observations pertaining to the physical characteristics of the soil on test pit logs.

Hand Augers

On August 5, 2003, Jacques Whitford advanced borings at six locations with a hand auger (HA-1 to HA-6 on Figure 2, Appendix A). These borings were advanced to auger refusal on cobbles which varied from 0.5 to 1.5 feet below ground surface.

Sample ID	Location/Rationale
HA-1	Adjacent to outside transformer pad
HA-2	Adjacent to outside transformer pad
HA-3	Along exterior building wall, adjacent to interior floor drain in building basement
HA-4	Apparent oil-stained surface soils (2 ft x 5 ft)
HA-5	From floor drain on basement level of building
HA-6	In area of apparent oil-stained surface soils (3 ft x 6 ft)

Surface Soil Samples

Based on test data collected for the site during the test pit and hand auger programs, Jacques Whitford collected surface soil samples from inside and outside the former mill building for polychlorinated biphenyls (PCB) testing. One sample (SS105) was tested for metals. The sample locations are labeled SS1-SS15 and SS101-SS108 on Figure 2.

Sample ID	Location/Rationale
SS1	South of floor "cut out" along north building wall; PCBs identified in drain
SS2	North of floor "cut out" along north building wall
SS3	East of floor "cut out" along north building wall
SS5	Floor "cut out" along north building wall
SS6	Floor drain along south building wall
SS7	Soil from concrete floor south of maintenance shop
SS8/SS9	Soil from concrete floor in maintenance shop
SS10	Soil from concrete floor near former transformer
SS11	East of stained soil outside building; PCBs identified in stained soils
SS12	South of stained soil outside building
SS13	West of stained soil outside building
SS14	Stained soils outside building (0-0.5 ft)
SS15	Stained soils outside building (0.5-1 ft)
SS101	Floor drain along south building wall
SS102	Soil on concrete floor on basement level
SS103	Soil on concrete floor on basement level
SS104	Soil on concrete floor on basement level
SS105	Soil from outside south wall, adjacent to interior drain (metals testing)
SS106	Soil from outside south wall, adjacent to interior drain (PCB testing)
SS107	Soil from outside south wall, down slope from interior drain
SS108	Soil from outside south wall, down slope from interior drain

Jacques Whitford collected samples HA-5 and SS-5 from the center of an approximately 1-ft x 1ft square cut out in the concrete floor of the former mill building. Jacques Whitford collected samples SS1, SS2, and SS3 by coring through the concrete floor in the vicinity of the "cut out." SS4, proposed for the west side of the "cut out," could not be completed due to an obstruction.

Jacques Whitford collected samples SS6 and SS101 from a floor drain along the south wall of the building. The drain was about 1.5 ft x 1.5 ft square and contained water at a depth of about 2 ft below the floor level. Soil samples SS106, SS107 and SS108 were collected outside the building, adjacent to the floor drain. Hand excavation along the building wall did not identify a discharge pipe from the drain. Jacques Whitford indicated that the drain may have an open bottom or sides under the building floor, with no point discharge.

Surface samples SS7, SS8/ SS9 (duplicate of SS8), SS10, SS102, SS103, and SS104 were composed of soil-like material that had accumulated on the building's concrete floor. SS7, SS8/SS9 and SS10 were collected from the second floor of the building; the others were collected from the basement/ground level. Sample locations were selected based on proximity to oil stains, maintenance activities and former electrical equipment, such as transformers. Oil stained concrete and wood was also observed inside the building; these materials have not been sampled to date.

Chemical Testing

Selected soil samples were tested for VOCs (EPA Method 8260-B), diesel-range organics (DRO), the eight RCRA metals, and PCBs. Samples were selected based on field PID readings, visual indications possible impact, and position at or near the water table. Sample numbers, dates, depths and analytical results are summarized on the data table prepared by Jacques Whitford in Appendix A.

Jacques Whitford tested soils from TP-101, TP-104, TP-107, TP-111 and HA-6 for DRO and VOCs. DRO concentrations ranged from approximately 9 mg/kg (TP-104) to 9,100 mg/kg (HA-6). DRO fingerprinting indicated the presence of heavy oil, such as motor oil, in the samples tested. Lighter oils, such as gasoline, diesel or #2 fuel oil, were not identified. This finding is consistent with the results of VOC testing where no constituents of lighter oils were identified, such as benzene, toluene, ethylbenzene, xylenes (BTEX) and methyl-tertiary butyl ether (MTBE). Methylene chloride and trichlorofluoromethane were detected in each of the samples and are suspected to be the result of cross contamination in the laboratory.

Soil samples from TP-102, TP-103, TP-107, TP-110, TP-112, SS-101 and SS105 were sampled for the eight RCRA metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver). With the exception of arsenic, the metals concentrations were below the DEP Remedial Action Guidelines (RAG) for residential settings. Arsenic was detected slightly above the RAG of 10 mg/kg at TP-102 (16 mg/kg), TP-103 (11 mg/kg), TP-110 (16 mg/kg), TP-112 (22 mg/kg), SS101 (17.5 mg/kg) and SS105 (13.6 mg/kg).

PCB Results for Former Transformer Pad: Relatively low concentrations of PCBs were detected in surface soils adjacent to the former transformer pad. Total PCB concentrations ranged from 0.119 mg/kg (parts per million – ppm) at HA-1 to 0.056 ppm at HA-2 (Figure 2).

PCB Results for Stained Surface Soils along South Building Wall: Jacques Whitford detected 2.8 ppm total PCBs in surface soils sampled from apparent oil-stained soils along the south building wall (SS14). The PCBs detected included Aroclor 1016, 1242, 1254, and 1260.

Surface soil samples collected at SS11, 10 feet to the east of SS14, were non-detect for PCBs. Likewise, surface soils collected at SS12, 10 feet to the south of SS14, were non-detect for PCBs. Surface sample SS13, 10 feet west of SS14, contained total PCBs of 0.135 ppm. The testing indicates limited aerial extent of PCB impacts at SS14.

PCB concentrations appear to decrease with depth at this location given detection of 2.8 ppm total PCBs in surface sample SS14 (0-0.5 ft), 1.8 ppm in sample SS15 (0.5-1 ft), and 0.63 ppm detected in HA-4 (1-2 ft); each of these samples were co-located.

PCB Results for Floor "Cut Out" along North Wall of Basement: Jacques Whitford detected 77 ppm total PCBs in surface soils sampled from the cut out in the concrete floor of the building basement (SS5). PCBs detected included Aroclor 1254 and 1260.

Soils sampled beneath concrete flooring at SS1, 10 feet south of SS5 contained 0.09 ppm total PCBs. Soils beneath the concrete floor at SS2, 5 feet north of SS5, contained 0.817 ppm total PCBs. Soils beneath concrete at SS3, 10 feet east of SS5, contained non-detectable PCB concentrations.

Test data indicate decreasing PCB concentrations with depth at the concrete floor "cut out." The surface soil sample SS5 (0-0.5 ft) contained 77 ppm total PCBs, while HA-5 (0.5 to 1 ft depth) contained 36 ppm total PCBs.

PCB Results for Floor Drain and Exterior Soils along South Wall of Basement: Total PCBs at 173 ppm (Aroclor 1254) were detected in sediments collected from a floor drain located along the south wall of the building basement (SS6). Confirmatory sampling from the same drain indicated 262 ppm PCBs (SS101) and 570 ppm PCBs (SS101 duplicate).

Soils sampled from a depth of 1.5 feet outside the building and adjacent to the interior floor drain (SS106) contained 113 ppm PCBs (Aroclor 1254). SS107, located about 10 feet west of SS106 (toward the river), contained 120 ppm Aroclor 1254; the sample depth was about 1 1/2 feet. SS108, located about 11 feet west of SS107, contained 9.3 ppm Aroclor 1254; the sample depth was about 1 foot.

PCB Results for Soil Build-up on Interior Concrete Floors: Material sampled from the surface of the concrete floor inside the building contained total PCBs ranging from 11 ppm (SS8) to 138 ppm (SS103). The PCBs detected included Aroclor 1254 and 1260.

Ransom Environmental

Ransom tested three background samples for arsenic on November 8, 2004. Surface soil samples were collected from the Windham Historical Society grounds, the US Postal Service Training Center and the South Windham Fire Department property. The concentrations of arsenic detected were 28.3, 5.1 and 24.1 mg/kg, respectively. These concentrations are similar to those detected at the 7 Depot Street site, and indicate the arsenic is naturally occurring.

2.2 13 Depot Street

2.2.1 Site Description

The 13 Depot Streets site is located on the southern side of Depot Street adjacent to Maine Central Railroad tracks, approximately 300 feet west of High Street. The site is designated by the Windham Assessor's Office as Map 38, Lot 6 and is approximately 40,850 square feet. The site is improved with a one-and-a-half story, wood frame garage, a one-and-a-half story wood frame former railroad station, a one-story wood-frame apartment and storage building, two steel railroad box cars with wood floors, one 10,000-gallon railroad tank car, and an in-ground scale. The site is served by public sewer and water. A site plan is shown on Figure 3.

The garage is constructed on a concrete slab and contains one floor drain and an above ground 275-gallon furnace oil tank. The former railroad station sits on a concrete slab with no basement and is used as storage for automobile transmissions and other automobile parts. The apartment and storage building contains an above ground 275-gallon furnace oil tank and numerous automotive parts and supplies. The two steel-walled, wooden-floor, railroad boxcars are used for storage for automotive engines, transmissions, and other miscellaneous materials.

The 10,000-gallon tank car was installed in 1983 between the former depot station and the southern railroad boxcar on the western edge of the site. It is constructed on a steel frame with a concrete foundation and it is used to store #2 fuel oil. The tank is surrounded on all sides by an earthen berm. The 240 square-foot concrete scale is located adjacent to the warehouse on the western side and apparently is drained via a discharge pipe that discharges into the drainage ditch at the southeastern border of the Subject Site.

A drainage ditch is located adjacent to the southern and western boundaries of the property. A PVC pipe discharges to the drainage ditch and is reportedly connected to the subsurface area near the in-ground scale west of the warehouse.

2.2.2 Prior Subsurface Investigations

Acadia Environmental

Acadia Environmental Technology (Acadia) of Portland, Maine prepared an underground storage tank (UST) Site Assessment Report in November 1993 for Merrill and Camilla Laskey, the former owners of the 13 Depot Street site. The report addressed a 500-gallon UST removed from the site on October 28, 1993.

The tank was installed in 1988 and was located as indicated on Figure 2. Upon removal, the UST showed light pitting on one end. The condition of the underground piping was reported to be excellent. A gasoline pump was enclosed directly above the tank in a small shed. Acadia reported a PID jar headspace result of 591 ppm in "black, wet, coal, organic, clay" approximately 3 feet below ground surface from the north end of the tank grave. All other PID readings were less than 100. A laboratory sample yielded 77 mg/kg by MDEP Method 4.2.3 for gasoline. During the tank removal, Acadia contacted Jon Woodard of the MDEP and was instructed to collect the laboratory sample, backfill the excavation and report the results. MDEP required no further action.

Jacques Whitford

Based on the findings of a Phase I environmental assessment of the 13 Depot Street Site, Jacques Whitford conducted Phase II fieldwork at the site between May 7 and 12, 2004. The fieldwork included excavation of test pits and soil sampling for PID screening and laboratory analysis.

Test Pits and Soil Sampling

On May 7, 2004, Jacques Whitford excavated ten test pits at the locations depicted on Figure 3. Test pits were terminated at bedrock refusal between 1.8 and 10 feet below ground surface (bgs). At each test pit location, Jacques Whitford, collected bag headspace samples at 2-foot intervals. Each soil sample was screened in the field for VOC content using a PID. Jacques Whitford also collected bag headspace samples at five surface sampling locations (HS-1 to HS-5) for PID testing.

Based on PID readings and location, Jacques Whitford chose three of the sample intervals for chemical testing for GRO and/VOCs. Jacques Whitford submitted the sample from TP-4 (2-4 feet below ground surface), for testing of GRO and VOCs; this sample had the highest PID reading at the site (>1000 ppm). Jacques Whitford also conducted VOC testing on soils with the highest PID reading from TP-2, located adjacent to a boxcar, and from TP-3, located in an apparent oil stained area in the gravel parking lot.

Jacques Whitford collected samples SS-1, SS-2, and SS-3 for PCB testing. These three samples were from areas of surface soil staining near stored transmission parts (SS-1), an aboveground hydraulic lift (SS-2), and from sediment in the floor drain in the garage (SS-3).

Two surface soil samples (SS-4 and SS-5) were collected for testing of the eight RCRA metals. These soils were sampled from areas of visible surface oil staining.

PID Screening and Chemical Test Results

PID readings varied from 7 to over 1,000 ppm. The only readings over 100 ppm were in TP-2, TP-3, and TP-4. Readings >1000 ppm were observed from 2-6 feet below ground surface in TP-4. The PID readings in TP-4 decreased with depth below the 4-6 feet depth interval. TP-4 is located in a downhill direction from the removed gasoline UST at the site.

Laboratory test results for soils sampled at the 13 Depot Street site are summarized below. The results indicate gasoline-impacted soils in test pit TP-4, located downslope from a former underground gasoline tank. The only other VOC detected in the soils was acetone, a likely laboratory contaminant. PCBs were not detected in the surface soil samples (SS-1, SS-2 and SS-3).

Analyte	**Units**	**TP-3, 2-4**	**TP-4, 2-4**	**SS-4**	**SS-5**
Acetone	ug/kg	197	<23,400	NA	NA
n-Butylbenzene	ug/kg	<7.1	2,570	NA	NA
Ethylbenzene	ug/kg	<7.1	5,440	NA	NA
4-Isopropyltoluene	ug/kg	<7.1	2,100	NA	NA
Naphthalene	ug/kg	<7.1	16,700	NA	NA
n-Propylbenzene	ug/kg	<7.1	3,340	NA	NA
Toluene	ug/kg	<7.1	4,320	NA	NA
1,2,4-Trimethylbenzene	ug/kg	<7.1	50,900	NA	NA
1,3,5-Trimethylbenzene	ug/kg	<7.1	24,400	NA	NA
m,p-Xylene	ug/kg	<14.2	26,400	NA	NA
o-Xylene	ug/kg	<7.1	2,990	NA	NA
Gasoline Range Organics	mg/kg	NA	837	NA	NA
Arsenic	mg/kg	NA	NA	12.8	15.6
Barium	mg/kg	NA	NA	47.4	24.1
Chromium	mg/kg	NA	NA	15.4	17.6
Lead	mg/kg	NA	NA	34.5	49.5

NA denotes not analyzed

With the exception of arsenic, the metals concentrations were below the MDEP Remedial Action Guidelines (RAG) for residential settings. Arsenic was detected slightly above the

RAG of 10 mg/kg in soil samples SS-4 and SS-5. Based on background soils sampling by Ransom, the arsenic appears to be naturally occurring.

3.0 RESPONSE ACTION PLAN

3.1 7 Depot Street

3.1.1 Petroleum-Impacted Soils

Given the industrial history of the site and availability of public water supply to the site area, MDEP has requested implementation of Baseline-2 soil clean-up guidelines for any impacts from heavy oil products (*e.g.*, bunker oil, motor oil). For soils impacted by light petroleum products, such as gasoline, MDEP has requested implementation of intermediate clean-up guidelines for soils. The clean-up requirements for each are:

> Baseline-2: removal free product and remove or remediate contaminated soil to: 500 to 1,000 ppm gasoline range organics and 200 to 400 ppm diesel range organics, each as measured by field headspace analysis.
>
> Intermediate: remove or remediate contaminated soil containing greater than 10 mg/kg diesel range organics, or 5 mg/kg gasoline range organics as determined by a DEP-approved laboratory method.

Prior work at the 7 Depot Street site by S.W. Cole involved investigation and clean-up of soils impacted by No. 6 fuel oil. Soils testing following excavation of impacted soils confirmed that the Baseline-2 standard was met.

Investigations by Jacques Whitford and subsequent review of all prior site investigation reports by Ransom indicated the Baseline-2 standard has been met for the areas sampled, including oil-stained surface soils. The maximum PID reading identified by Jacques Whitford during their investigations in 2004 was 8.5 ppm. Chemical testing of stained soils indicated that the oil was a heavy-end product, such as motor oil.

Soils impacted by light petroleum products, such as gasoline, have not been identified at the 7 Depot Street site. Excavation contractors working at the site will be instructed to contact Ransom should soils with petroleum odors or other evidence of contamination be encountered. In such cases, Ransom will conduct a site visit and perform sampling of impacted media to determine the appropriate course of action. MDEP will be notified if unanticipated subsurface contamination is encountered.

3.1.2 PCB-Impacted Soils

Soils from the floor drain and the concrete cut-out in the building basement, and areas sampled outside the mill building contained PCBs at concentrations ranging from <32 to 570 ppm. The PCBs were likely released from maintenance and handling of former transformers and other electrical equipment used at the site. Given the age of the mill

building, it is possible the transformers and electrical equipment were in use prior to 1978. Since the concentrations of PCBs identified in site soils are ≥50 ppm, the impacted materials are defined by EPA under 40 CFR 761.61 as "PCB Remediation Wastes."

Site development includes the demolition and removal of the former mill building, followed by construction of residential units (refer to Figure 4). Based on EPA criteria under 40 CFR 761.61, the areas of subsurface soil impact (labeled "Area A" and "Area B" on Figures 2, 4 and 5) are categorized as follows.

Area A: Area of PCB-impacted soils located beneath or on the periphery of a proposed paved site access drive. This area meets EPA criteria for a "Low Occupancy Area" in that it constitutes an "unoccupied area outside a building" and is a location where "occupancy is transitory" (40 CFR 761.61). More specifically, a Low Occupancy Area is an area where occupancy for individuals not wearing dermal and respiratory protection is less than 335 hours per calendar year (an average of 6.7 hours per week).

In accordance with 40 CFR 761.61, the clean-up level for PCB-impacted soils in Low Occupancy Areas is ≤25 ppm, or ≤100 ppm if a soil cap is installed.

Area B: Area of PCB-impacted soils located beneath landscaping and lawn of residential units. This area potentially meets EPA criteria for a "High Occupancy Area" in that it constitutes an area where occupancy for individuals not wearing dermal and respiratory protection is 335 hours or more (an overage of more than 6.7 hours per week).

Clean-up levels for PCB-impacted soils in High Occupancy Areas is ≤1 ppm or ≤10 ppm with a soil cap.

Additional Testing

Ransom will conduct additional testing to delineate PCB-impacted soils following demolition and removal of the former mill building. In accordance with the EPA self-implementing pre-cleanup sampling approach as provided in §761.61 Subpart N, sampling will utilize a 3-meter grid centered around the floor drain on the basement level of the former mill building. Proposed sample locations are labeled B1 through B12 on Figure 5.

Soils will be sampled continuously over 2-foot intervals using direct-push drilling; each hole will be advanced to a depth of 6 to 8 feet. Soils will be composited from each 2-foot sample interval, yielding three to four samples from each boring for laboratory testing of PCBs. Soils will be tested for PCBs in the laboratory in accordance with EPA Method SW-846.

NRPA Permitting

Given anticipated soil excavation within 75 feet of the Presumpscot River, the project will fall under the Natural Resources Protection Act (NRPA). The project team will

request a site visit by MDEP's Land and Water Quality Bureau to identify specific requirements under NRPA and the Army Corps of Engineers. The Windham Code Enforcement Office will also be contacted relative to possible requirements under Municipal Shoreland Zoning rules.

Soil Removal and Disposal

Prior to soil removal, notice will be provided to the EPA Regional Administrator (at least 30 days prior to clean-up) and a PCB clean-up plan will be prepared for review and approval by EPA as required under 40 CFR 761.61. The plan will include, as required, schedule, disposal technology and approach.

Area A: Following demolition and removal of the former mill building, PCB-impacted soils ≥25 ppm will be targeted for removal in Area A by a hazardous waste contractor based on the findings of the additional soil testing. Following soil removal and backfilling to proposed site grades, a soil cap and shore stabilization (*e.g.*, rip-rap) will be installed in accordance with 40 CFR 761.61. The cap and shore stabilization will assist in stabilizing surface soils, reduce infiltration into the subsurface and substantially reduce the potential for exposure to PCB-impacted soils not excavated.

The PCB clean-up target of 25 ppm is more stringent than the 100 ppm threshold allowed by EPA in Low Occupancy Areas with the installation of a soil cap. Based on soil test data obtained for the site to date, it is anticipated the 25 ppm target can be reached with reasonable effort. Should shallow groundwater or proximity to the river inhibit reaching the 25 ppm goal, a secondary goal of 100 ppm will be implemented as allowed by EPA with installation of a soil cap.

Area B: Following demolition and removal of the former mill building, PCB-impacted soils ≥1 ppm will be targeted for removal in Area B by a hazardous waste contractor. Prior explorations in this area indicate that a relatively small volume (<20 cubic yards) will require excavation for PCB impacts.

The excavation work in areas A and B will be performed using an excavator and excavated soils will be transferred directly to trucks or roll-off containers lined with polyethylene sheeting for subsequent transport to the disposal facility. Tarps will be used to cover loads prior to transport. Following appropriate waste characterization and coordination with an appropriate disposal facility, the excavated soil will be disposed of in accordance with §761.61(a)(6)(v).

TSCA-regulated remediation waste (≥50 ppm PCBs) will be disposed of at the CWM Chemical Services, LLC facility located in Model City, New York. If segregation is feasible, soils with concentrations of PCBs <50 ppm will be disposed at either the Crossroads special waste landfill in Norridgewock, Maine or the Sawyer landfill in Hamden, Maine.

Post-Excavation Testing

Ransom will document soil conditions in each excavation area following the excavation of PCB-contaminated soil. The soil sampling will be conducted in accordance with §761.61(a)(6). Ransom will collect confirmatory soil samples from the walls and the bases of each of the excavations. If bedrock is encountered at the walls or base, samples will not be collected.

If the excavation is safe to enter, then the sampling will be conducted based on a 1.5-meter grid interval in accordance with the composite soil sampling procedure outlined in 40 CFR 761.289 for point sources of PCB contamination. If the excavation is unsafe to enter, sampling grids will be impossible to set up, and therefore, composite soil samples will be collected by dragging a scoop up the sidewalls and across the base of the excavation. Ransom will make the determination if the excavation is unsafe to enter based on OSHA guidelines.

Soil Cap

In accordance with 40 CFR 761.61, the cap proposed for Area A will consist either of compacted soil with a minimum thickness of 25 cm (10 inches) or concrete or asphalt cap with a minimum thickness of 15 cm (6 inches). Other EPA requirements include:

- The cap will be of sufficient strength to maintain its effectiveness and integrity during the use of the cap surface which is exposed to the environment.
- The cap will not be contaminated at a level ≥1 ppm PCB per AroclorTM (or equivalent) or per congener.
- Repairs will begin within 72 hours of discovery for any breaches which would impair the integrity of the cap.
- The properties of a soil cap include: a) permeability equal to or less than 1×10^{-7} cm/sec; (b) percent soil passing No. 200 Sieve >30; (c) liquid limit >30; and (d) Plasticity Index >15.

Deed Restriction

EPA requires deed restrictions for caps and Low Occupancy Areas within 60 days of completion of a cleanup activity (40 CFR 761.61). If necessary, the owner of the 7 Depot Street site will record, in accordance with State law, a notation on the deed to the property, or on some other instrument which is normally examined during a title search, that will in perpetuity notify any potential purchaser of the property:

- That the land in Area A has been used for PCB remediation waste disposal and is restricted to use as a low occupancy area as defined in §761.3;

- Of the existence of the cap in Area A and the requirement to maintain the cap;
- The applicable cleanup levels left at the site in Area A, under the cap.

The owner will submit a signed certification to the EPA Regional Administrator that he/she has recorded the notation.

3.1.3 PCB-Impacted Building Materials

Testing has identified PCB-impacted materials inside the former mill at concentrations ranging from about 5 to 138 ppm. Materials tested include soil-like material that has accumulated on top of the concrete floors on the basement level and on the second floor of the building (Figure 2). Other materials possibly impacted by PCBs include concrete and wood in areas where oil stains were observed.

Following additional characterization of building materials for PCBs and EPA approval of the proposed PCB mitigation plan, a hazardous waste disposal contractor will remove PCB-impacted soil build-up and other materials from the building interior and manage the materials as PCB Remediation Waste (40 CFR 761.61). Follow-up testing of remaining concrete and other building surfaces will be conducted to confirm removal of PCB Remediation Waste prior to demolition. Confirmatory testing will be conducted in accordance with Subpart O of 40 CFR 761.61, "Sampling to Verify Completion of Self-Implementing Cleanup and On-Site Disposal of Bulk PCB Remediation Waste and Porous Surfaces."

Bulk waste materials will be tested prior to disposal in accordance with requirements of the disposal facility. TSCA-regulated remediation waste (≥50 ppm PCBs) will be disposed of at the CWM Chemical Services, LLC facility located in Model City, New York. If segregation is feasible, soils with concentrations of PCBs <50 ppm will be disposed at either the Crossroads special waste landfill in Norridgewock, Maine or Sawyers in Hamden, Maine.

3.2 13 Depot Street

3.2.1 Clean-up Goal for Petroleum-Impacted Soils

As detailed in section 3.1.1, MDEP has established a clean-up goal for gasoline-impacted soils at the site of 5 mg/kg GRO (lab result). For soils impacted by heavier oils (fuel oil, kerosene, motor oil), MDEP has assigned a "Baseline-2" goal of 200 to 400 ppm (field screening with a PID).

3.2.2 Soils Excavation

Gasoline-Impacted Soils

A hazardous waste contractor will excavate gasoline-impacted soils in accordance with the clean-up goal. The excavation work will be performed using an excavator and

excavated soils will be transferred directly to trucks or roll-off containers lined with polyethylene sheeting for subsequent transport to the disposal facility. Tarps will be used to cover loads prior to transport. MDEP will be notified at least five working days prior to the start of excavation activities.

Ransom will provide monitoring of soils in the excavation with a photoionization detector (PID) calibrated to the MDEP set point for gasoline impacted soils. Based on recommendations of MDEP, soils with PID readings greater than 50 ppm will be targeted for excavation.

Surface Oil Stains

MDEP has requested removal of surface soils visibly impacted by oil. Past use of the site for automobile parts repair and storage has resulted in areas where surface soils have been impacted by petroleum products such as motor oil and transmission fluid. The hazardous waste contractor will excavate areas of visibly stained surface soils and transfer the soil to a truck or roll-off container. The excavation will be monitored by Ransom who will use a PID to identify soils requiring excavation and off-site disposal/treatment (i.e., soils with PID readings of 200 to 400 ppm).

3.2.3 Excavated Soil Testing and Disposal

For excavated soils impacted by gasoline spilled from the former underground tank, MDEP will provide confirmation that the materials contain "virgin hydrocarbon" and reclamation at an in-state recycling facility is feasible. For excavated soils impacted by motor oil and transmission oil, testing will be conducted in accordance with the requirements of the disposal/treatment facility.

It is anticipated that the excavated petroleum-impacted soil will be reclaimed at Commercial Recycling in Scarborough, Maine. Prior testing of site soils has not identified constituents such as metals or PCBs that would render soils impacted by transmission or motor oil ineligible for reclamation in state.

3.2.4 Post-Excavation Testing

Ransom will document soil conditions in the excavation area following excavation of gasoline-impacted soil. In the area of gasoline-impacted soil excavation, Ransom will collect confirmatory soil samples from the walls and the base of the excavation, and submit the samples for GRO and VOC (EPA Method 8260B) analysis. In the area of heavier oil-impacted soils excavation, Ransom will collect soil samples from the walls and base of the excavation for screening with a PID using the MDEP-approved headspace method.

The number of samples will be contingent upon the size of the excavation and soil types encountered. A minimum of four wall samples and one bottom sample will be collected. If bedrock is encountered at the walls or base, samples will not be collected.